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TITLE	A PDP-8 PROGRAM TO PROVIDE TELETYPE ENTRY INTO THE IBM JET SYSTEM
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SOURCE LANGUAGE	PAL

A PDP-8 PROGRAM TO PROVIDE TELETYPE ENTRY INTO THE IBM JET SYSTEM

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ABSTRACT

This program in effect uses the PDP-8 to simulate a teletype machine which is equipped with X-OFF, X-ON, and EOT features to accomplish entry into an IBM 360 computer with the Job Entry Teletype (JET) interface. Minimal requirements included as peripheral equipment to the basic PDP-8 are an alternate teletype with FORTRAN keyboard and a standard Dataphone Set. The program provides for teletype entry into the Jet System from the keyboard or paper tape reader. A teletype page print and/or tape punch record of the transmission is obtained.

INTRODUCTION

This describes the PDP-8 routine to handle entry into IBM Job Entry Teletype (JET) System from the PDP-8 computer. The user terminal has the basic PDP-8 with an alternate teletype ASR33 with device codes 40 (receive) and 41 (send) and a standard Western Electric Dataphone set with device codes 46 (receive) and 47 (send). The added teletype has the standard FORTRAN keyboard without X-OFF, X-ON, or EOT features. Character codes generated are the standard mixed parity ASCII codes.

USAGE

The program may be loaded from magnetic tape or paper tape with S. A. 200.

During normal operation the teletype operator can communicate directly with the IBM 360 using the alternate teletype just as if it were a teletype with the X-OFF and X-ON features.

If a line transmission error occurs then the operator must load address 0217 and start from the console and retransmit the incorrect line. This procedure must be repeated until the transmission is received correctly.

Paper tape preparation should be in strict compliance with the JET user's manual.

METHOD

The program checks each outgoing character and corrects it as necessary to insure that only even parity codes are transmitted to the IBM computer.

The PDP-8 senses an incoming X-ON and switches control such that the user may originate traffic. An X-OFF or EOT character is sensed from the user's teletype which switches control back to the IBM computer.

MEMORY

The program TUCC is stored on Page 1 and uses 120₍₈₎ contiguous locations with S. A. 200.

APPENDIX A. PROGRAM TUCC

1 LN=1

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200
B1,6461 (KSF DATA SET
JMP .-1
6466 (KRB DATA SET
6416 (TLS TTY#2
DCA M (TEMP STORE
TAD M
TAD N (CHECK FOR X-ON
SZA
JMP .+2
JMP B2 (YES
CLA (NO
JMP B1 (RECEIVE ANOTHER CHARACTER
B2,CLA (START TO TRANSMIT TO IBM 360
TAD R (RUBOUT
6476 (TLS DATA SET TO SET FLAG
A1,6401 (KSF TTY#2
JMP .-1
6406 (KRB TTY#2
DCA H (TEMP STORE
(START TO CORRECT PARITY TO MAKE EVEN
CLA
TAD F (-12
DCA G
TAD H
A,ISZ G (HAVE ALL 12 BITS BEEN CHECKED
JMP B (NO
JMP C (YES
B,CLL
RAR
SNL
JMP A (BIT ZERO
ISZ J (BIT SET SO ADD ONE TO COUNTER
JMP A (GO TO CHECK NEXT BIT
C,CLA
TAD J (NO. OF BITS SET
CLL
RAR
SNL (EVEN OR ODD PARITY
JMP D (EVEN PARITY SO NO CHANGE
CLA (ODD PARITY SO CLEAR BIT 8
TAD K
DCA J (ZERO IN J
TAD H
AND L
JMP E

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D, CLA
TAD K
DCA J (ZERO IN J
TAD H
E, 6471 (TSF DATA SET
JMP .-1
6476 (TLS DATA SET
6416 (TLS TTY#2
JMS Ø (CHECK FOR X-OFF
JMS T (CHECK FOR EOT

2 LN=71
JMP A1 (GO SEND ANOTHER CHARACTER
F, 7765 (-12
G, 0000 (TEMP STORAGE FOR BIT COUNTER
H, 0000 (TEMP
L, 7577 (MASK FOR BIT 8
J, 0000 (TEMP FOR NO. OF BITS SET
K, 0000 (ZERO
M, 0000 (TEMP
N, 7757 (X-ON COM
P, 7555 (X-OFF COM
V, 7574 (EOT COM
R, 0377 (RUBOUT
(SUBROUTINE TO CHECK FOR X-OFF
Q, NOP
CLA
TAD H
TAD P
SZA
JMP I Q (NO X-OFF
JMP B1 (YES X-OFF
(SUBROUTINE TO CHECK FOR EOT
T, NOP
CLA
TAD H
TAD V
SZA
JMP I T (NO EOT
JMP B1 (YES EOT

